TECNAU

TC1000-F *USER MANUAL*

HIGH PERFORMANCE FAST CUTTER

Series TC1000-F

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1) PRODUCT DESCRIPTION

- The TECNAU high performance cutter is formed of modular groups, assembled with rigid metallic structures and high precision components that guarantee long life and easy maintenance.

- The TECNAU cutters are generally integrated in complex systems and lines like laser printers, bookmaking systems, high performance inserters, finishing on demand applications because of their high reliability and durability.

- The main structure is built in stabilised aluminium and steel with cross bar of stabilised cast iron.

- The cross blade group and the side trimming circular knives group are designed and built as removable and interchangeable cartridges (patented) that can be easily replaced by the operator.

- Two different models of cross blade cartridges, the Oscillating Blade Cartridge (TC 1010) and the Vertical Blade Cartridge (TC 1020) can be used with the Tecnau cutter, depending on the Customer application.
  The two cartridges, interchangeable, are changed in few minutes and the customer can use one of the two according with his needs.

  * The Oscillating Blade Cartridges achieves highest durability and cutting speed in applications not requiring strip removal.

  * The Vertical Blade Cartridges is able to remove strips, of the same blade thickness, at a single stroke.

- The TECNAU cutter has a vertical lifting device that allows to adjust the height of the paper level in order to easily connect the cutter to other equipment.

- The TECNAU cutter has one or two feeding channel and is able to cut and trim continuous stationery of various format and material with single and with dual webs.

2) PRODUCT FEATURES

TECNAU CUTTER TC1000 and TC2000

- Microprocessor controlled
- Up to two independent feeding channels
- Single or dual web entry
- Paper transport and blade driven by brushless motors (no wear and maintenance)
- Up to 99 cutting programs memory
- Parallel and serial interface for on-line connection with external devices
- Minimised maintenance cost and time
- Modular design and construction

  * Oscillating Blade Cartridge (TC1010)
  * Vertical Blade Cartridge (TC1020)
  * Vertical Blade cartridge 7,8 mm (TC1030)
  * Side Trimming Cartridge (TC1002)
  * Side trimming and central cut cartridge (TC1003)

- Base on wheels with blocking device
- Height adjustment paper level device (TC1005)
- Display and keyboard for programming , information and services
- Automatic paper loading
- Automatic stop and paper end
- Programmable cut length
- Cutting speed and paper acceleration control
- Plexiglas cover
- Service counter
- Optical mark reader (OMR) [Optional]
- Bar code reader [Optional]
- 1/6” and 1/8” paper increments
- Maximum pin feeders width 500 mm

3) TECHNICAL SPECIFICATION

Paper Specification

- Paper weight: Min 60 gr/mq
  Max 250 gr/mq
- Multicopy forms: Max weight 350 gr/mq
- Form width: Max 20”
- Form height: Min 2” 5/6 max 24”
- Strip cut facility: Programmable with oscillating blade (TC1010) 1/6” (TC1020) or 7,8 mm (TC1030) with Vertical Blade Cartridge
- Side trimming: up to 25 mm per side
- Paper speed adjustment : 99 positions
- Height paper level from the floor: from 970 mm. to 1210 mm (TC 1005 option)

Size and weight

- Width: 840 mm
- Dept: 650 mm
- Height: 1100 m
- Height: TC 1005 option: min 1.055 mm, max 1.295 mm
- Weight: 160 kg

Power requirement

- 230V/110V single phase
- 50/60 Hz
- 1.5 KVA

Cartridges

- Oscillating Blade Cartridge (TC1010)
- Vertical Blade Cartridge (TC1020)
- Vertical Blade Cartridge 7,8 mm (TC1030)
- Side trimming cartridge (TC1002)
- Side trimming with central cut cartridge (TC1003)

Cutting (cuts per hour)

Cartridge	TC 1010	TC 1020	TC 1030
Cut Selected	Single Cut	Single Cut 1/6" Blade	Strip Cut 7,8 mm Blade
Form Height 4"	40.000	40.000	40.000
Form Height 8"	30.000	30.000	30.000
Form Height 12"	25.000	25.000	25.000

4) CUTTER MODELS

ONE CHANNEL CUTTER				
TC1000 MODELS	**1012**	**1013**	**1022**	**1023**
Oscillating Blade Cartridge	*	*		
Vertical Blade Cartridge			*	*
Side Trimming Cartridge	*		*	
Side Trimming with Central Cut Cartridge		*		*

TWO CHANNELS CUTTER				
TC2000 MODELS	**2012**	**2013**	**2022**	**2023**
Oscillating Blade Cartridge	*	*		
Vertical Blade Cartridge			*	*
Side Trimming Cartridge	*		*	
Side Trimming with Central Cut Cartridge		*		*

CUTTER OPTIONS

TC 1004 Merger interface: TC 1000 and TC 2000 models. The option enable the connection of the cutter to the merger device.

TC 1005 Height Adjustment Device: TC 1000 and TC 2000 models. Paper level adjustment from 970 mm. to 1210 mm.

TC 1006 Waste paper bin.

TC 1007 Central knife group.

TC 1008 Paper Loop Control Device for connection to laser printers up to 90 mt/min.

TC 1009 Paper Input Device

CUTTER CARTRIDGES

TC 1010 Oscillating Blade cartridge: TC 1000 and TC 2000 models.

TC 1020 Vertical Blade cartridge: TC 1000 and TC 2000 models.

TC 1030 Vertical Blade cartridge 7,8 mm.: TC 1000 and TC 2000 models.

TC 1002 Side trimming cartridge: TC1000.

TC 1003 Side trimming and central cut cartridge: TC 1000.

TC 2002 Side trimming cartridge: TC 2000

TC 2003 Side trimming and central cut: TC 2000

OTHER DEVICES

TC 1100 Merger Unit Device with for connection to the TC 1000 and TC 2000 models with TC 1004 option (merger interface).

TC 1200 Vertical Stacker. 2000 sheets capacity.
Max form width 480mm; max form length 16" and min form length 4". For TC 1000 and TC 2000 models.

5) TRANSPORT AND INSTALLATION

- The cutter can be lifted with a lifting unit by passing it through the two bars under the structure as indicated in the figure 1.

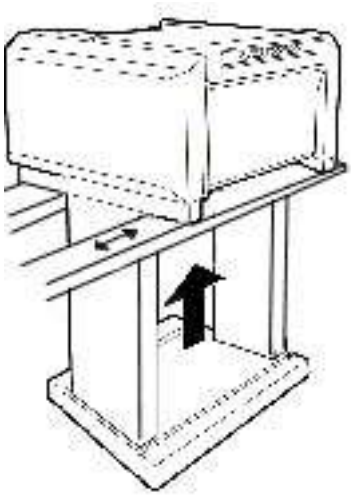


Fig. 1

- Four wheels are located in the base and allow to move the cutter in the working area manually.

The cutter can be fixed at the floor rotating the four screws at the corner of the base with the key.

Four cylinders with antishoking material will be moved vertically by the screws up to fixing the cutter on the floor. See figures 2 and 3.

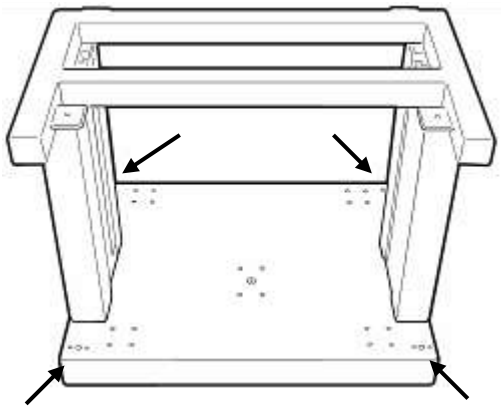


Fig. 2

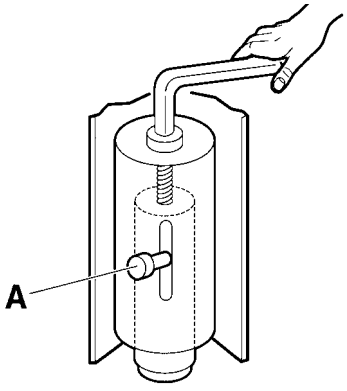


Fig. 3

If the cutter has the **option TC 1005**, it is possible to adjust the height of the paper output plane from 970 mm to 1210 mm. rotating the screw located at the center of the base with the key. See figure 4.

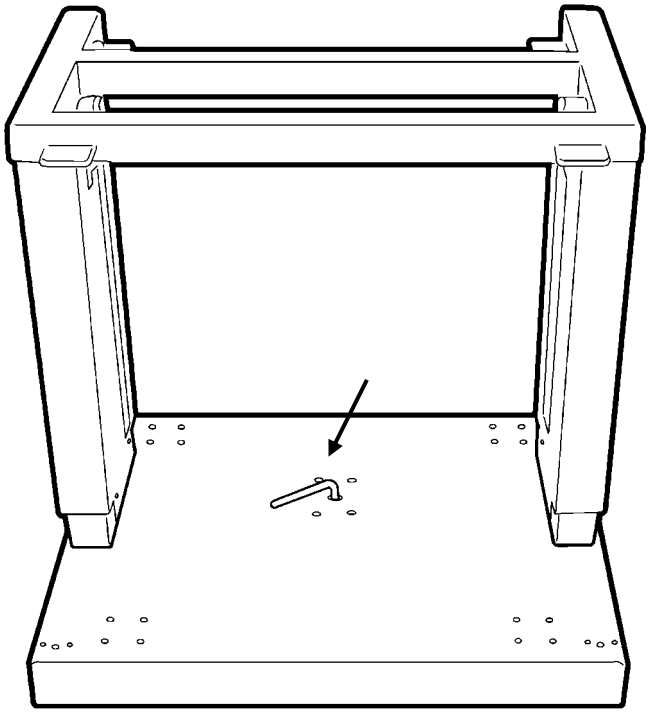


Fig.4

6) MAIN GROUPS DESCRIPTION

SIDE TRIMMING CARTRIDGE (TC 1002-TC 1003)

The cartridge TC 1002 (fig.6) has two couples of circular knives,Fig.5 (A), for trimming one the left and one the right side of the paper module.

The lower knife is driven by the shaft (F) controlled by one a.c. motor through one tooth belt and a couple of pulleys (G is one).

The upper knife is driven by the couple of cog- wheels (E)

The lower knife is slightly pressed against the upper knife by two dished plate springs. The pressure is adjusted with the flange ©.

The paper strip trimmed are ejected through the two plates (B).

The cartridge TC 1003 has three couples of circular knives, two for trimming the left and right side and one for cutting the continuos module in the middle.

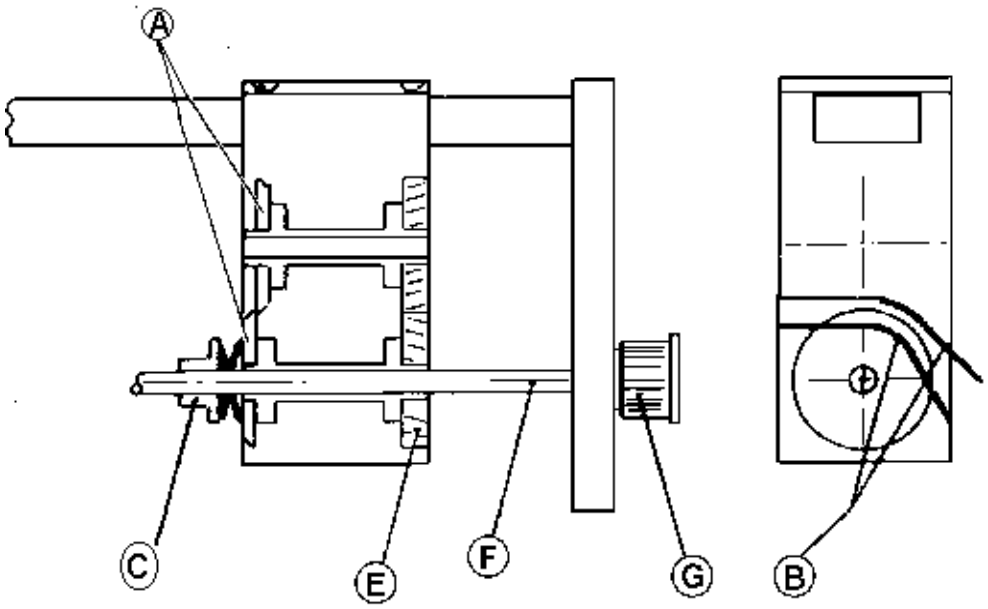


Fig. 5

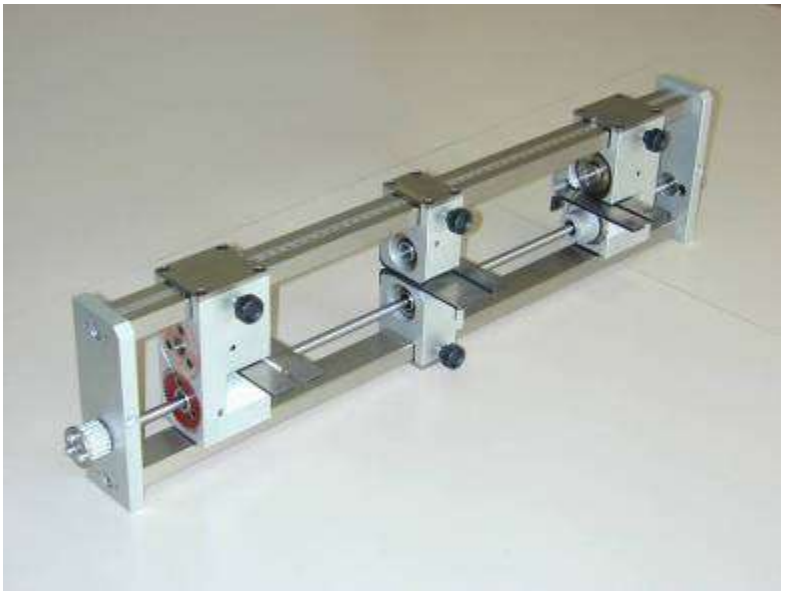
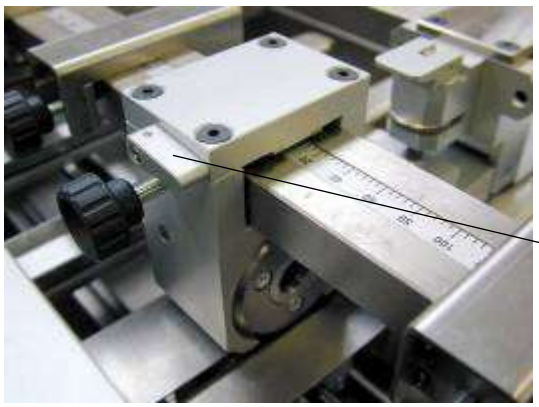


Fig. 6

CLOSED DOWN

In the cartridge TC1003R is possible to open the central knife rotating the lever in clockwise direction.

Before moving the lever, unscrew the black knob.



OPEN

PAPER FEEDING GROUP

The brushless motor drives the splinted shaft through the tooth belt and the pulley fixed at the left side of the shaft (fig.7).

The shaft moves the two tractors, one on the left and one on the right side that transport the paper.

The position of the two tractors along the shaft can be adjusted according with the paper width.

On the left tractor there is one optical fibre sensor to determine the correct position of the cutting line when the paper is loaded.

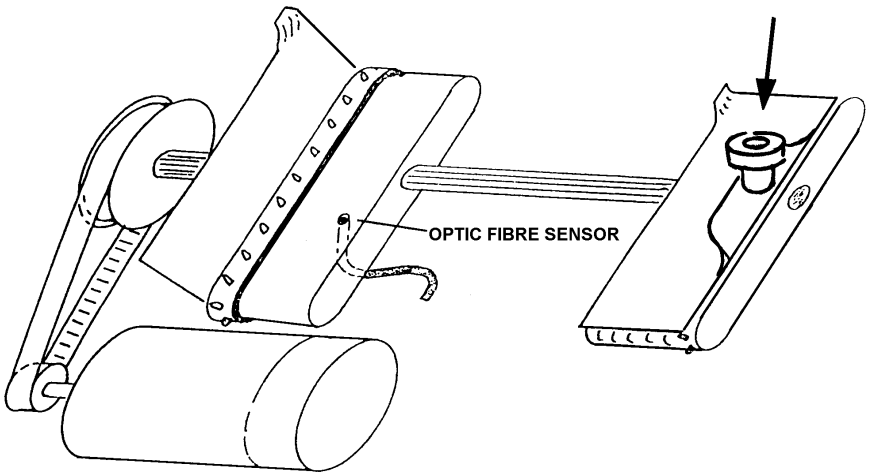


Fig. 7

OSCILLATING BLADE CARTRIDGE

The Oscillating Blade Cartridge (Fig.8), with low inertia device, allows to reach the maximum speed and productivity in the jobs specially where the strip cut is not required.

The gear moves the main shaft (1) and the two eccentrics. The two side rods (2) and the pins (3) cause the oscillating motion of the blade-holder (4).

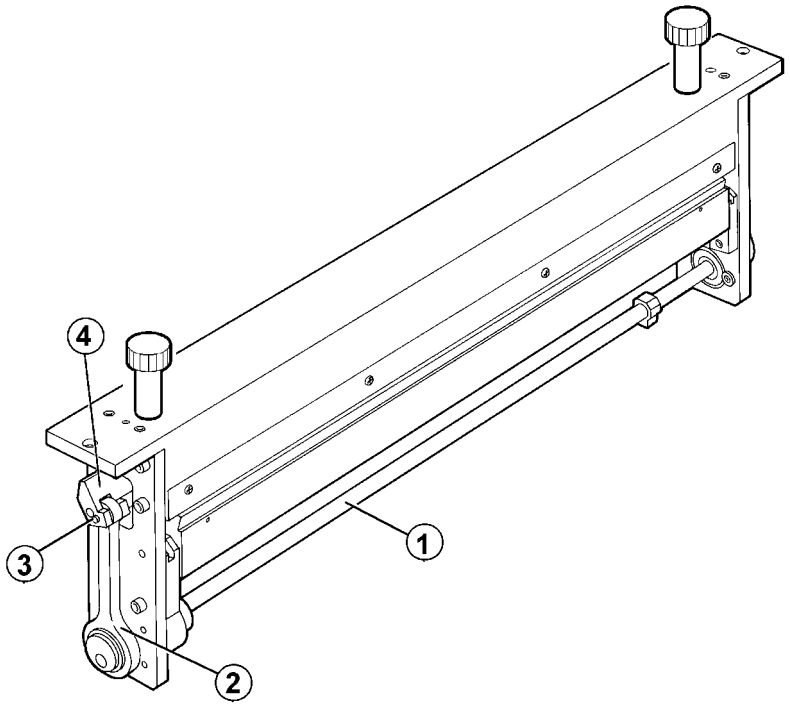


Fig. 8

VERTICAL BLADE CARTRIDGE

The vertical blade cartridge (Fig.9) is used in the applications where a strip cut is required.

The vertical blade mechanism takes the motion from the cutter through the gear (1) on the main shaft of the rods.

The gear moves the main shaft (2) and the two eccentrics. The two side rods and the two steel plates (4), move vertically the blade (5).

This system avoids pins, bearing and other connecting devices to minimise mechanical play.

The blade moves vertically between two lubricated adjustable guide blocks (6).

To achieve the strip requested there are two **lower counter blades (7)** assembled with two cast iron bars pulled against the central vertical blade.

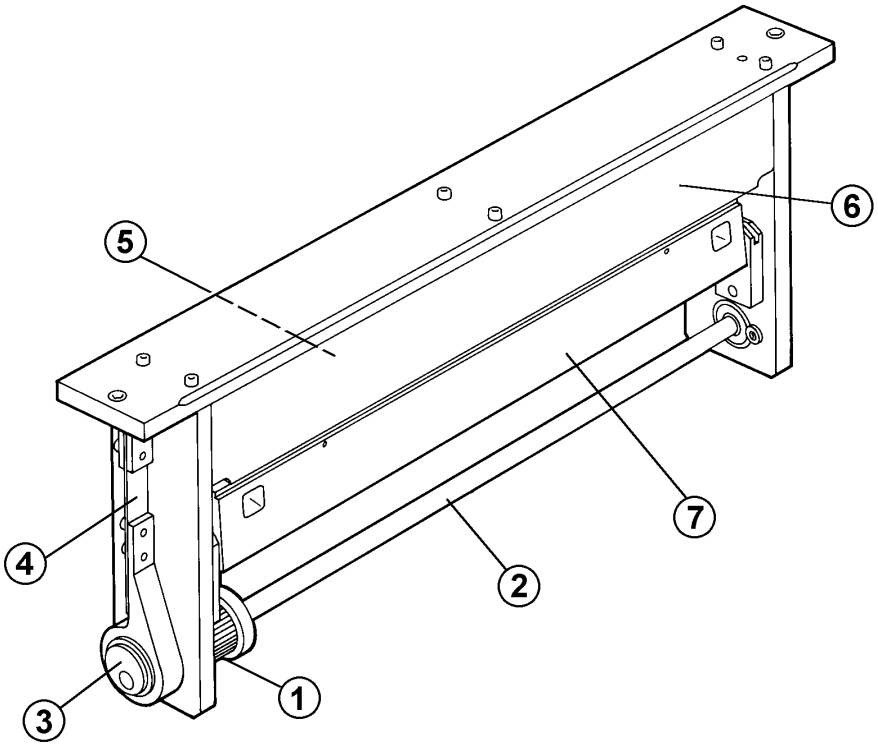


Fig. 9

SHEET EXTRACTOR GROUP

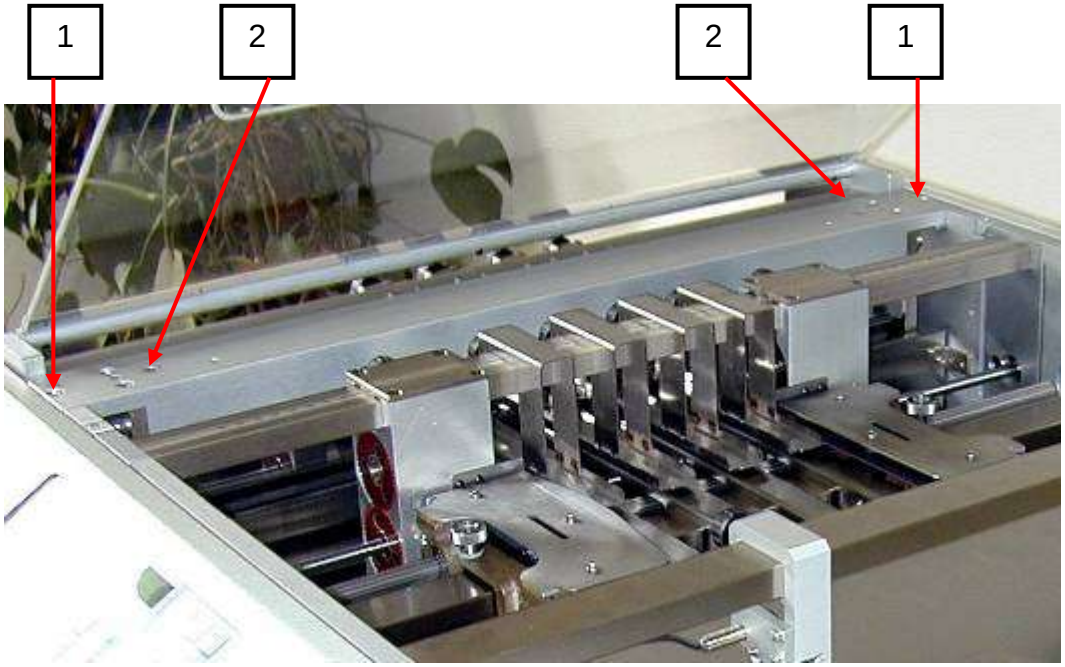
The cutter has, at the exit of the paper, the sheet extractor group that determines a light traction on the sheet and guarantee to have the extraction speed higher than the paper feeding speed.

The pressure rollers can be positioned on the support bar, in the most suitable position, according to the job.

7) REPLACEMENT OF THE CARTRIDGES

A. To replace the Oscillating Blade Cartridge (TC 1010) or the Vertical Blade Cartridge (TC 1020):

1) Unscrew the two side screws on the top of the Cartridge.(1)
2) Screw into the two holes(2) two handles supplied with the Cutter.
3) Lift vertically the Cartridge
4) Replace the Cartridge with another one using the same handles.
5) Screw off the two handles.
6) Screw down the two side screws on the top of the Cartridge.



B. <u>To replace the Side trimming cartridge (TC 1002 or TC 1003):</u>

1) Open the two side covers, removing the two screws for each side.
2) Remove the belt between the a.c. motor and the cartridge placed on one side of the cutter.
3) Remove the belt between the cartridge and the extractor placed on the other side of the cutter.
4) Remove the lower paper guides from the tractors holding bars.
5) Unscrew the two screws(1), turn out the two locking devices and remove the cartridge carefully.
6) Replace the cartridge.
7) Screw down the two screws to lock the new cartridge.
8) Put in the same position as before the lower paper guides, the belt, and the two side covers.

8) OPERATING INSTRUCTIONS

1) GENERAL INFORMATION

1.1. How to load the paper

* Open the plexiglas cover
* Open the tractors' covers
* Send on the paper under the brush, turn out the two knobs of the tractors adjusting their position and centring the paper holes on the sprockets, then lock the knobs. (Avoid having the paper too tight / loose between the tractors).
* Close the tractors' covers.
* To position the circular knives, turn out the knobs put on each knife, and moving the knife groups to right or left, adjust them to have the knives in the position of the wanted trimming.
* Close the plexiglas cover.
* Turn-on the cutter through the main switch.
* The display shows information of the software installed.

1.2. The Keyboard

The keyboard is placed on the left side of the cutter and is divided into four parts:

* The EDITING keyboard on the left side: six keys, four blue to select and/or edit the applications, two white for service.

* The OPERATING keyboard on the center: four keys that allow to start and stop the selected application

* The ALPHANUMERIC keyboard on the right side: 12 keys that allows, in connection with the EDITING keyboard, to set up new applications and to modify the existing ones and to settle the cutting line and the cutter speed.

* The alphanumerical DISPLAY for text messages

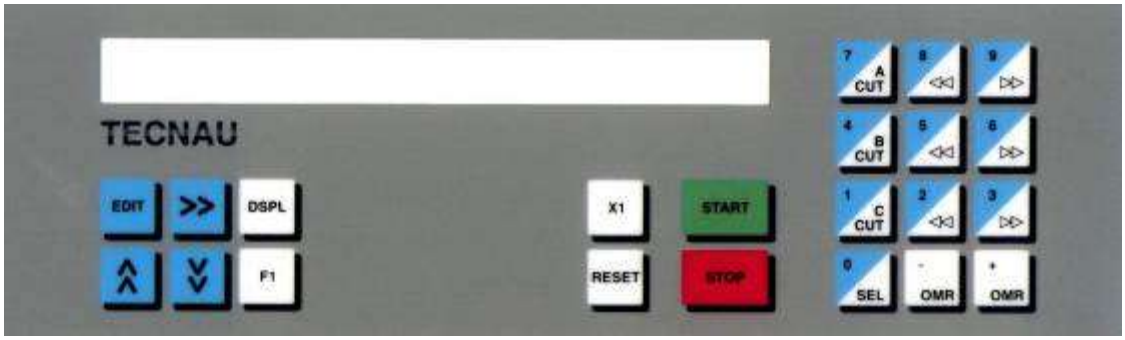


Fig. 10

1.2.1 The Display

It s possible to display different windows, with different data, pressing **DSPL** key. For each window, the application number and description is available on the left of the first line.

At power on, the **STATUS** window is displayed.

Depending on the status of the cutter, the displayed values are:

Off Line or On Line

No Ready or Ready

Fan Fold or Merger

Prn (if the printer in on line)

No Loop (if the loop is not present)

Pressing **DSPL** key, the **SPEED** window is displayed.

The displayed values are:

- On the centre of the first line, the actual group page counter followed by a slash and the preset number of page per group
- On the right, the actual page counter followed by a slash and the preset maximum page quantity for the current job
- On the second line, the preset speed and the actual average speed in meter/minute, feet/minute, page/hour

Pressing for two seconds the **DSPL** key, the **PASSWORD** window is displayed with Total cut counter, Partial cut counter, name and date of the Firmware version.

In this page is possible to introduce the Passwords (see page 38, Cutter Parameters).

1.3. How to start the application or job.

* Switch on the cutter.

* Press any key on the keyboard : the display shows on the upper line the number of the last application executed.

- **To start again the last application** executed, load the paper and press on the OPERATING keyboard in sequence:

  - START to start up the motors
  - START to feed the paper
  - START to begin the job

- **To start a new application:**

  * Press EDIT for two seconds: the display shows the number of the last application.

  * Through the EDITING keyboard, select the number of application to execute, using the horizontal arrow.

  * Press on the OPERATING keyboard, in sequence:

    - START to confirm the application number and start up the motors
    - START to feed the paper
    - START to begin the job

1.4 How to stop the job

To stop the job press STOP on the OPERATING keyboard

1.5 Cutting position adjustment

The OPERATING keyboard has two keys, **8** and **9** split with the arrow forward (8) and backward (9).

The two keys are used to adjust the paper cutting line position if requested. Each press of the keys move the paper 1/120" in the selected direction.

1.6 Cutting speed adjustment

The ALPHANUMERICAL keyboard has two keys "**-**" and "**+**".

Entering the Operator Password 12345, then changing to the **SPEED** window, the two keys are used to adjust and/or to change the speed value defined in each specific application, also in running condition.

Pressing the key (**-**) the speed decreases while with the key (**+**) the speed increases.

1.7 Single Cut Cycle and Paper Feeding

With a normal pressure of the key **7** (split with A CUT) it is possible to start **one cut cycle** on the Cutter

Pressing for about 2 seconds the same key **7**, it is possible to do a **paper transport** without cut, usefull for the correct positioning of a post processing device.

1.8 Merger paper loading and loop adjustment

Using the two keys, **2** and **3** split with the "arrow forward" (2) and "arrow backward" (3) it is possible, moving the paper in the direction of the arrows, to load or adjust the quantity of paper in the loop between the Merger and the Cutter.

1.9 End of the paper

At the end of the paper, the cutter stops and the display shows:
“ End of paper”
“ Reload Paper”.

1.10 Error or information messages on the display

When error messages or information are displayed, to reset the error press RESET and start again the job.

If the error message continue to be displayed, detect the error code in the upper line at right of the display and call the service center.

2. THE APPLICATIONS

2.1 How to set up or the change the applications

* Switch on the cutter

* Press EDIT for two seconds

* Set the number of the required applications on the ALPHANUMERICAL keyboard using arrow up / arrow down.
Data can only be input using keypad after level 1 password has been entered. (See chapter: - Cutter Parameters.)

  The maximum number of applications that can be stored is 99.

ATTENTION!!!

When the parameter of an existing application is modified, to memorise the changes, press EDIT or START.

To switch from one parameter to another press the blue key arrow up or arrow down on the EDITING keyboard

1° Parameter: Job Num. :

Pressing the key arrow up the display visualises “JOB” and it’s possible to enter the number of the application from 1 to 89.
To execute the applications from 90 to 99 it’s needed to enter the user password because these applications have special functionalities.

2° Parameter: DESCRIPTION

Pressing the key arrow up the display visualise “DESCRIPTION” and it’s possible to input the title of application (max 10 character).

To input the alphanumerical characters press the key according with the following table:

7 **PQRS**	**8** **TUV**	**9** **WXYZ**
4 **GHI**	**5** **JKL**	**6** **MNO**
1 **. / ,**	**2** **ABC**	**3** **DEF**
0 *** %** **Space**	**-** **arrow forward**	**+** **arrow backward**

Example: to write U, press **8** twice
Z, press **9** four times
J, press **5** once

The arrows forward and backward move the cursor left and right.
Press 0 for space or to cancel.

3° Parameter: Speed 1..99

This parameter sets the paper feeding speed.
The numerical value is between 01 for the minimum speed and 75 for the maximum speed.

Sequence : select the parameter
Introduce the speed value (two digits)

4° Parameter: Max Page Qty (9999=infinity)

Defines the total number of Pages (4 digits) before stopping.
If set to "9999" the Cutter runs forever.

Sequence: select the parameter
Introduce the total number of pages (4 digits)

5° Parameter: Max Page Qty for Group

Defines the Grouping if **>0**; this parameter sets the number of pages for each Group.

Sequence: select the parameter
Introduce the foils counter value (4 digits)

6° Parameter: Delay Groups 1=100msec 999=stop

Defines the delay between the groups in steps of 100 msec. (3 digits)
During this time, the Cutter temporary stops and an optional Exit Tape connected to the Cutter moves to separate the groups.
If it is set to "999" the Cutter stops at the end of each group.

7° Parameter: Max Strip Dimens.

The value introduced (inches + "/96) must be higher than the maximum length of the cut paper that is considered as strip. The maximum suggested value for a strip is ½" and the suggested value for this parameter is 00+50.

8° Parameter: Strip Delay 1 = 2 msec.

This value is the delay from the strip cut and the feeding (exit) of the next page.
Increasing this parameter the speed of the system decreases, do not exceed 50.

9° Parameter: Loading Offset

The loading offset is the value that fixes the motion of the paper needed to execute the first cut correctly.
Generally this parameter is set up when it is requested the cut of the strip between two paper modules.
The compensation value is generally half value of the strip cut.

Sequence: select the parameter
enter the value in 1/96 of inches, as explained at paragraph 3.1

10° Parameter: Length 1

The value introduced is the length (inches + ”/96) of the sheet to be cut. See paragraph 3.1.

Sequence: Select the parameters
Enter the value
Switch to the following length parameter
Enter the next value if requested
Etc.

It is possible to introduce up to 16 length.

The value not set or set to “0” are not displayed.

ATTENTION!!!
The sum of the 16 cut length data inputs must be equal to the length of the module used.

12° Accel. Ramp incr . Start speed

The first value defines the starting speed on acceleration ramp:
-If it is set **20** the paper starts immediately at this preset speed.

The second value defines the speed increments on acceleration ramp:
-If is set **10** the paper starts from speed 20 the first cut, then speed **30** the second cut, speed **40** the third cut, speed **50** the fourth cut, etc…until presetted speed (parameter n°3) is reached.

13° Parameter: Prn On Line (1 = YES) (2 = Ext ADStop)

The parameter defines if the cutter is on line with printers:
when it is set to 1, the start–stop is driven by the paper loop photocell between Printer and Cutter.
When a Merger is connected and selected, the start–stop is driven by the paper loop photocell between Printer and Merger.
When set to "2", the external STOP forces to "0" the external output CUTTER Ready, instead of stopping the cutter.

Sequence: Select the parameter
Enter the value

14° Parameter: Merger, 1=NO

This parameter set to 1 allows to work without Merger Device.

15° Parameter: Blade 0=Osc 1=Ver1 2=Ver2

The parameter indicates the Blade Cartridge installed in the Cutter:

0 for Oscillating Blade Cartridge (TC1010).

1 for Vertical Blade Cartridge with 2 blades (TC1035).

2 for Vertical Blade Cartridge with 3 blades (TC1020 or similar with strip cut capability).

9 for special function: paper transport without paper cut

When change the cartridge, enter the proper value.

3) HOW TO SET THE CUT LENGTH PARAMETERS.

3.1 To enter the sheet length parameter:

* Select the “cut length” input data using arrow up /arrow down
* Digit the whole part of the length in inches (two digit)
* Press the key +
* Digit the fraction part of the length, in 1/96” as for the following conversion table:

INCHES		DATA IN 1/96”
1/6	EQUIVALENT TO	16
2/6	EQUIVALENT TO	32
3/6 (= 1/2”)	EQUIVALENT TO	48
4/6	EQUIVALENT TO	64
5/6	EQUIVALENT TO	80
6/6 (=1”)	EQUIVALENT TO	1
1/8	EQUIVALENT TO	12
2/8	EQUIVALENT TO	24
3/8	EQUIVALENT TO	36
4/8 (=1/2”)	EQUIVALENT TO	48
5/8	EQUIVALENT TO	60
6/8	EQUIVALENT TO	72
7/8	EQUIVALENT TO	84
8/8 (=1”)	EQUIVALENT TO	1

Examples:					
	3” 1/6	enter	03	+	16
	5” 5/6	enter	05	+	80
	11” 5/6	enter	11	+	80
	12”	enter	12	+	00
	5” 3/8	enter	05	+	36
	3” 7/8	enter	03	+	84

EXAMPLES OF APPLICATIONS

1st Example

Cut the 12” continuous paper form/web to obtain 12” length sheets, at medium speed level.

Solution: **Data input**

Description		*Enter the application title*
Speed		50
Max Page Qty		-
M.P.Q. for Group		-
Delay Between Groups		-
Cut length	01	12 + 00
Cut length	02	-

Use the Oscillating Blade Cartridge.

Remember: to switch from a parameter to the following one, press the blue key arrow up.

2nd Example

Cut the 12” continuous paper form/web to obtain 11”+4/6” length sheet (A4 format) and 2/6” strip off between two sheets at medium speed level.

Solution: **Data input**

Description		*Enter the application title*
Speed		50
Max Page Qty		-
M.P.Q. for Group		-
Delay Between Groups		-
Loading Offset		00 + 16
Cut length	01	11 + 64
Cut length	02	00 + 32
Cut length	03	-

Use the Oscillating Blade Cartridge.

3rd Example

Cut the 12" continuous paper form/web to obtain 11 ½" length sheet and ½" strip off between two sheets, at medium speed level.

Solution: **Data input**

Description		*Enter the application title*
Speed		50
Max Page Qty		-
M.P.Q. for Group		-
Delay Between Groups		-
Loading offset		0 + 24
Cut length	01	11 + 48
Cut length	02	00 + 48

Use the Oscillating Blade Cartridge.

4th Example

Cut the 12" continuous paper form/web to obtain 9"1/6" inches and 2" 5/6" length sheets for each form at medium speed level.

Solution: **Data input**

Description		*Enter the application title*
Speed		50
Max Page Qty		-
M.P.Q. for Group		-
Delay Between Groups		-
Loading offset		-
Cut length	01	09 + 16
Cut length	02	02 + 80

Use the Oscillating Blade Cartridge.

5th Example- Oscillating Blade Cartridge

From the 12" continuous paper form/web in batches of 1000, cut sheets with length of 11"4/6 and strips of 2/6".
Stop the cutter after 250 sheets cut.
Speed level: high

Solution: **Data input**

Description		*Enter the application title*
Speed		70
Max Page Qty		1000
M.P.Q. for Group		250
Delay Between Groups		-
Loading offset		00 + 16
Cut length	01	11 + 64
Cut length	02	00 + 32

The cutter stops after 250 sheets To start again push Start on the keyboard.

Use the Oscillating Blade Cartridge.

6th Example

From the 12" continuos paper form/web, cut sheets with length of 11" 5/6 and strip of 1/6", stopping the cutter after 500 sheets cut and temporary pause of 15 seconds after the first 125 sheets cut.

Speed level: low

Solution with Oscillating Blade Cartridge: **Data input**

Description		*Enter the application title*
Speed		30
Max Page Qty		0500
M.P.Q. for Group		0125
Delay Between Groups		150
Loading Offset		00 + 08
Cut length	01	11 + 80
Cut length	02	00 + 16

The pause input is expressed in 100 msec units.

After 500 sheets the cutter stops. To start again the job, push Start on the keyboard.

Solution with Vertical Blade Cartridge (blade 1/6" thick):

Data input

Description		*Enter the application title*
Speed		30
Max Page Qty		0500
M.P.Q. for Group		0125
Delay Between Groups		150
Loading offset		-
Cut length	01	12+00
Cut length	02	-

The pause input is expressed in 100 msec units.

After 500 sheets the cutter stops. To start again the job, push Start on the keyboard.

SPEED COMPARISON TABLE

The actual speed of the cutter depends on the cutting length.

Below two examples of speed for length of 11” and 8” ½.

			L = 11”
SPEED	**MT / MIN**	**FT /MIN**	**PG / H**
10	28	91	6.100
20	50	162	11.000
30	69	224	15.000
40	84	273	18.400
50	96	312	20.900
60	109	354	23.700
65	115	373	25.000
70	118	383	25.700
75	321	393	26.500

			L = 8” 1/2
SPEED	**MT / MIN**	**FT /MIN**	**PG / H**
10	26	84	7.700
20	45	146	13.400
30	60	195	18.000
40	71	230	21.400
50	81	263	24.300
60	91	295	27.300
65	94	305	28.100
70	97	315	29.000
75	100	325	30.000

MACHINE PARAMETERS

The cutter parameters are very important for the correct functioning of the cutter. The parameter's data are common to all the applications and if incorrect, can determine failures.

The access to the parameters is protected by two passwords.

1st Password (Operator).

Switch on cutter. Press Reset key. Display shows last job. Press EDIT for 2 seconds.
Display shows: Job N°.
Press (arrow right) to view jobs stored in machine.
Press arrow up or arrow dw to see parameters of job selected.
Select job to be modified or examined using arrow right key.
Press EDIT.
Press DSPL for 2 seconds to reach the Password window.
Display shows:

#**PASSWORD#**

Press keys **1**,**2**,**3**,**4**,**5** on numerical keypad to login as operator.
Press DSPL. You can now enter the EDIT mode and modify parameters of job.
Press EDIT for 2 seconds.
Press arrow up or dw to select parameter.
Use numerical keypad to change parameter.
Press EDIT to end modification of parameters.

To logout from the operator password enter "00000" as Password.

While you are logged with the operator Password, the "=" sign between "Spd" and the set value of the speed (e.g. "50") is flashing, reminding you that the speed can be changed with "-" and "+" keys of the alphanumeric keyboard.

2nd Password (Engineer level)

ATTENTION!!!

This password allows the access to the RAM of the CPU and must be used by specialised personnel only.

Switch the cutter on, press Reset and then DSPL for 2 seconds; the display changes to the Password window and shows:

#PASSWORD#

Press 5 times the key "**7**" and 3 times "**DSPL**" to reach the "Machine Parameters" window.

Note: Press the keys (arrow up) and (arrow dw) to select the different parameters.

PARAMETERS

1. Load Oscillating blade (480 = 1") Default data 4220

The parameter indicates the distance between the photosensor of paper presence on left tractor and the cut line.
The data is expressed in 1/480 of inch.
Default value is equal to 4220/480 inches.

2. Load Vertical blade 1 (480 = 1") Default data 4270

The parameter indicates the distance between the photosensor of paper presence on left tractor and the cut line of the Vertical 1 Blade (7.8 mm)..
The data is expressed in 1/480 of inch.
Default value is equal to 4270/480 inches.

3. Load Vertical blade 2 (480 = 1") Default data 4340

The parameter indicates the distance between the photosensor of paper presence on left tractor and the cut line of the Vertical 2 Blade (4.9 mm).
The data is expressed in 1/480 of inch.
Default value is equal to 4340/480 inches.

4. Cutter jam 1Lf 2Rg 3Both 0None Default data 0

This parameter allows to enable the left and/or the optional right paper jam control of the Cutter.

5. Merger paper jam 1=yes Default data 0

This parameter allows to enable the paper jam control of the merger.

6. Load Phot. <--> OMR phot. (480 = 1") Default data 8400

The parameter indicates the distance between the cut line and the sensitive area of the OMR reader photocell.
The data is in 1/480 of inch. The value is valid only if OMR is enabled.

Default value is 8400.

7. OMR window (480 = 1") Default data 80

The data is the window length within which the OMR device must read and detect the information printed (black mark).
The data is in 1/480 of inch, and is valid only if OMR is enabled.

Default value is 80.

8. Autom. OMR Set 0Yes 1No 2NoOMR Default data 2

When 0, the position of the mark is automatically centered inside the window.
When 1, the position of the mark is centered only with "-" and "+" keys.
When 2, the OMR functions are completely disabled.

Default value is 0.

9. Sec Motor-Off Default data 60

The motors can be stopped automatically after the cutting cycle to save energy consumption and to limit the circular knives wear.
The motor off data indicates this time in seconds.

10. Sec Trimmer Off **Default data** **0**

In On-line mode the trimmer motor can be stopped automatically after an External Stop to limit the circular knives wear.
The trimmer off data indicates this time in seconds.

11. Reversed Cycle 1 = yes **Default data** **0**

The normal cycle is Transport + Cut. When this parameter is set to 1 the cycle become Cut + Transport
Only used for special application.

12. Keyboard position, 1=right **Default data** **0**

This parameter is normally set to **0**.
Must be set to **1** if the Keyboard (with Display) is mounted on the right side of the Cutter.
Doing this, some specific keys like “Cutting position adjustment”, and some display indications like the arrows in the SPEED window, assume the correct direction.

13. Language 0=It 1=UK 2=Ge 3=Fr 4=Es **Default data** **1**

This parameter allows the language selection.

14. Stacker? 1= connected 1 = yes **Default data** **0**

This parameter must be set to 1 if the stacker is connected.

15. Pg. Counter stacker reset **Default data 30**

This parameter defines the interval of pages for stacker check position (upper reset).

16. Loop Delay (1=20msec) **Default data 10**

This parameter defines the delay to the cutter re-starting after the stop because of the decreased paper loop.

17. End Paper 1=Quick Stop 2=Clear **Default data 0**

1, Quick Stop: the paper is stopped as soon as the end of paper photocell is cleared.

2, Clear: at the end of paper the last sheet is ejected (only for foils over 8 inches).

0 : Last sheet is always ejected

18. Ext. start delay 1=20msec **Default data 0**

In On-Line mode this parameter defines the delay, in steps of 20 msec, between the assertion of the External Start input and the actual start of the Cutter.

19. Merger continuous 1 = no **Default data 0**

With the default value of “0” the connected Merger feeds the paper with continuous motion to avoid paper damages at higher speed.
When it is set to “1” the Merger paper moves in start-stop following the Cutter transport. (Not suggested for high speed applications).

20. Under run pulses **Default data 0**

This parameter introduces a small backward movement of the paper during the blade cycle to avoid sticking of the paper to the blade when sticky paper is used.
The suggested value is 20 pulses.

21. Ready mode 0, 1, 2 **Default data 0**

This parameter sets how the ready signal is sent to the other device. If the data is set at 0 the cutter sends only the status signal “RUN”. If this parameter is set at 2 the cutter sends the status signal “READY” both the status signal “RUN”.

22. External stop mode **Default data 0**

In connection with External Start / External Stop only in On-Line mode:

0 if External Stop is active, External Start control one single cycle

1 if External Stop is active, External Start not operative

23. Transport Trigger 480 = 1” **Default data 0**

Not working parameter.

24. Run Without controls 1=yes **Default data 0**

Setting the data at 1 the “paper presence”, “cover opened” and “paper jam” controls are removed.

25. Reload parameters 1 = yes **Default data 0**

If the input data is 1, with a Power-OFF/Power-ON cycle, the default data are automatically entered into the parameters.

9) MAINTENANCE

- The main cutter parts are protected by gaskets to avoid the paper dust to enter into the rotating devices and to block them.
  It's important to clean the cutter when the paper dust starts cumulating.
  It's suggested to clean the cutter every day before starting working.
  The most important parts are lubricated with grease (bearing etc.) for life and sealed.

- The trimming circular knives are lubricated with oil through a wick that pushes against the thread f the lower knives: this transmits the lubrication to the upper knives by rubbing.

- It's recommended to introduce oil in the lateral hole, daily, as indicated in the figure 10

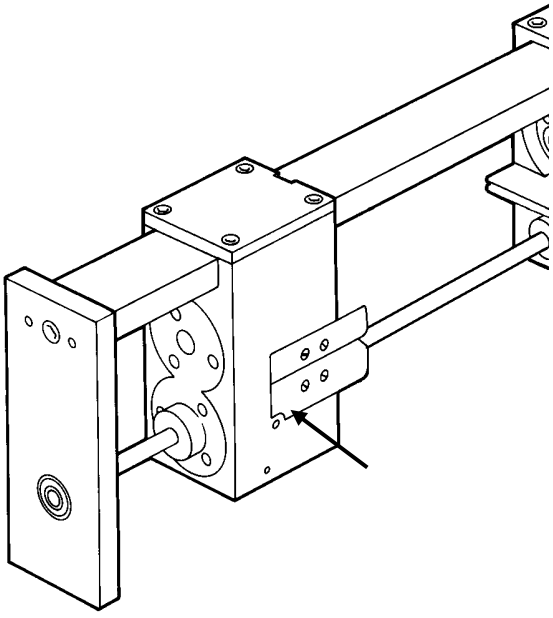


Fig. 12

Lubricate tractor drives monthly. Prevent tractor jamming.